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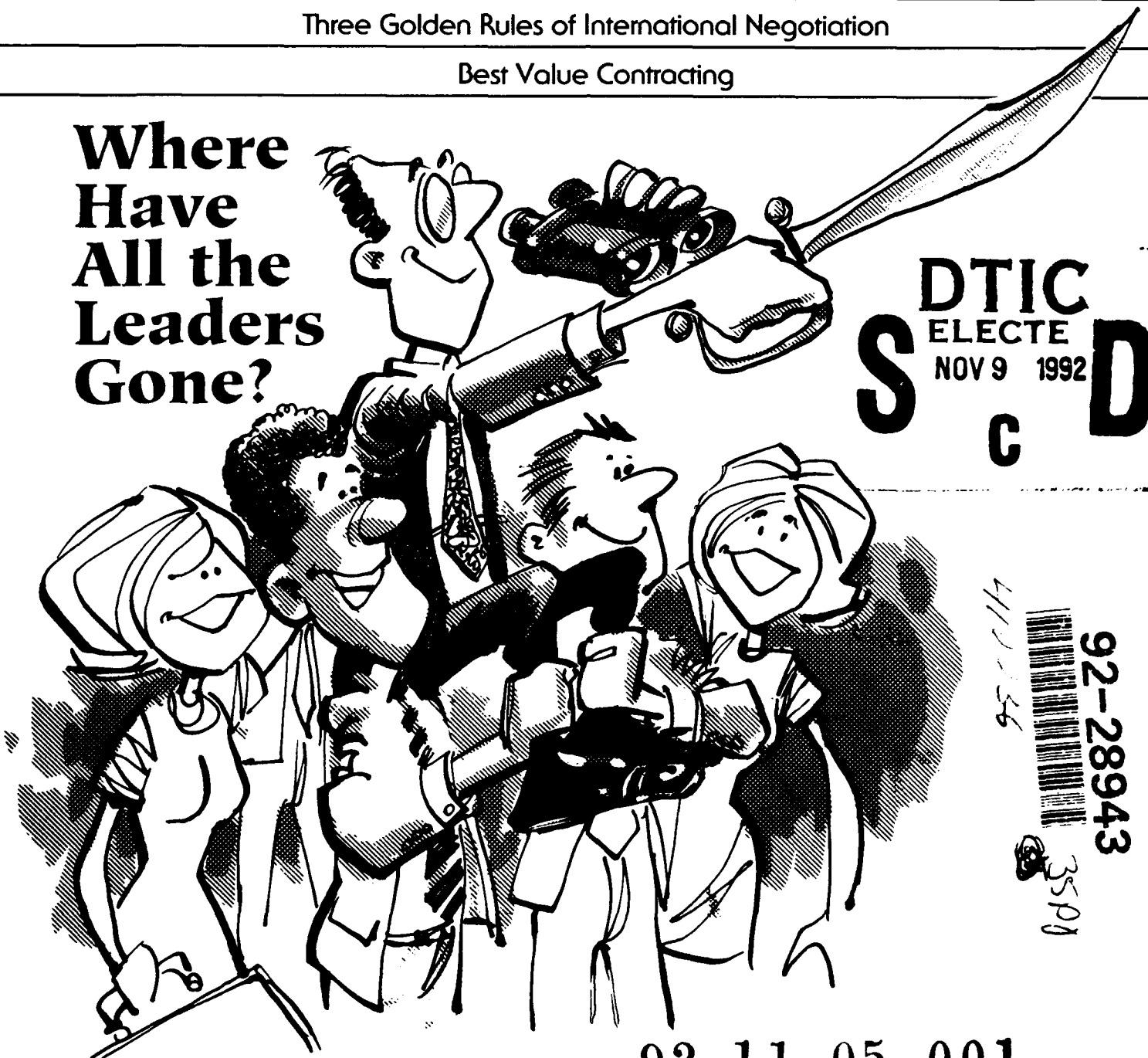
Bar Code Management

The Acquisition Officer at War

Three Golden Rules of International Negotiation

Best Value Contracting

**Where
Have
All the
Leaders
Gone?**



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Journal of the Defense Systems Management College

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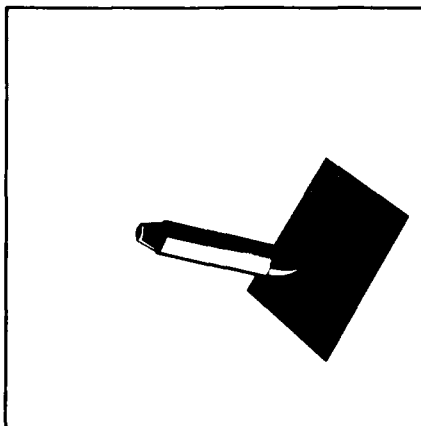
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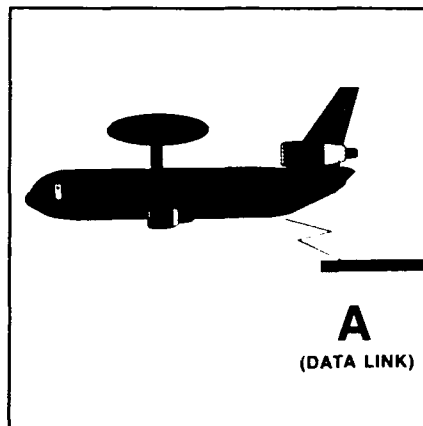


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Whenever in this publication "man," "men," or their related pronouns appear, either as words or parts of words (other than with obvious reference to named male individuals), they have been used for literary purposes and are meant in their generic sense.



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SUCCESSFUL BAR CODE MANAGEMENT IN THE U.S. AIR FORCE

Reduce Costs and Improve Mission Support

Wayne D. Kirk

Everyone is aware of the positive impact of bar code technology in their personal lives. Implementation of bar code systems has reduced our checkout time at retail stores. This technology provides for significantly improved support in the Air Force mission at wholesale and retail levels. Materiel movement time in the Department of Defense (DOD) distribution system has been shortened, resulting in a reduced need for items in the inventory. Consequently, costs are reduced and mission support is improved. Bar code systems are ideal for record/form tracking management in the Air Force hospital system.

For the past 10 years the important mission of developing the use of bar code technology within the Air Force has been the responsibility of the Logistics Applications of Automated Marking and Reading Symbols (LOGMARS) Program Management Office (PMO), Headquarters Air Force

Mr. Kirk is a senior logistics manager with Atlantic Research Corporation, Dayton, Ohio. He is a retired Air Force colonel and was assistant professor at the Graduate School, School of Systems and Logistics, Air Force Institute of Technology. Mr. Kirk has more than 30 years experience in Air Force related logistics positions.

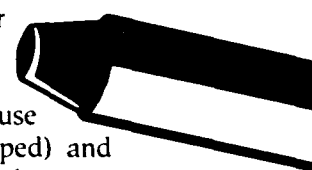
Materiel Command, Wright-Patterson Air Force Base, Ohio. The LOGMARS PMO is chartered by the Secretary of Defense. A Senior Advisory Group, which monitors the LOGMARS projects at the DOD level, consists of senior logistics personnel from the Army, Navy, Air Force, Marine Corps and the Defense Logistics Agency. In the Air Force, the LOGMARS program is headed by the Deputy Assistant Secretary of the Air Force for Communications, Computers and Logistics.

The LOGMARS Office at Wright-Patterson AFB is established to develop a standard bar coding technology and to coordinate, direct, develop and implement this technology within the Air Force. The program manager, Mr. James Whitaker, fulfills these requirements by planning, programing and allocating funds for the acquisition and implementation of bar code systems. Project officers are assigned within the PMO to closely manage in-house projects, as well as those developed and implemented by contractors. More than \$60 million has been invested in bar code technology to improve Air Force mission support.

During the past decade, LOGMARS project management became increasingly difficult with the growing number of proposed projects and projects under development. Compounding management problems were the

extreme diverse types of projects being developed; i.e., maintenance, supply, transportation and health care. To resolve these problems, Mr. Whitaker obtained the services of the Atlantic Research Corporation (ARC) to assist in developing detailed procedures to manage projects from concept origination to system implementation.

The initial thrust was to develop detailed time schedules for more than 30 proposed projects and projects under development. These time schedules were for in-house (Air Force developed) and contractor-developed projects. Time Line application software developed by Symantec Corporation was chosen as the primary management tool to track project progress. Project officers skillfully prepared task schedules that were effectively coordinated with the system requester and the developer. Each Time-Line schedule was reviewed and revised several times before final baselines were set. Schedules are updated monthly to include notes about task slips, problems and solutions. Project schedules are plotted in Gantt and PERT to provide the project officer, the PMO and the system requester with a convenient means to track project progress, and to be alerted to task elements due completion in the near- and distant-future.



Simultaneously with schedule development, Mr. Whitaker and ARC began developing a standard procedure for field units to organize their ideas for bar code system requirements, and to request LOGMARS Office financial and technical assistance in developing a system. A booklet developed to explain the project application process included a decision tree, which explained the entire application process to system requesters. Another booklet developed explained procedures for cost-analysis requirements that would help justify final project acceptance and development.

The booklets effectively standardized units requests for bar code systems and the Time-Line schedules accurately tracked Concept Paper and Project Management. Timely and thorough reviews of concept papers are accomplished by the PMO staff. Because of funding limitations, all concept papers cannot become projects. The PMO staff weighs

tomation of Air Force Security Police Armories, Office Equipment Inventory Automation, USAF Academy Cadet Inventory Management System, and Tool Control Tracking system.

Depot-level initiatives have been in Material Condition Tag System, Competition Advocate Document Tracking System, Local Issue Tracking System, and Material Safety Data Sheet management.

Numerous LOGMARS health care projects have been completed and more are planned. Some are Outpatient Records Tracking System, Medical Laboratory Specimen Identification and Tracking, Storage and Retrieval of Pathology Reports, Emergency Medical Patient Records System, Document Storage and Retrieval of Local Purchases, Outpatient Records Bar Coding Tracking System and Tri-Service Item History File Library System.

The Air Force LOGMARS Clearinghouse Applications Directory recently was updated, providing a further description of LOGMARS projects and points of contact to DOD activities. This directory is extremely useful for units developing concept papers and provides project information to the PMO staff during concept-paper reviews. When possible, existing systems will be exported to requesters with similar requirements.

The PMO and ARC are establishing a LOGMARS Technology Awareness Center (TAC) to aid in review of concept papers, and to evaluate the latest in bar code technology. The TAC should be fully operational in December 1992 and will include hardware and software to demonstrate much of the technology used in completed projects and projects that are under development. This information will be readily available to the entire PMO staff and help each individual conceptually understand projects managed by other project officers. As a result of this understanding, each Project Officer will bring a

significant amount of knowledge to the table each time a Concept Paper is reviewed for possible system development.

The TAC provides a central location in the Air Force to evaluate state-of-the-art bar code and optical image technology. The field units will be able to examine hardware and software items that may enhance their mission performance. Senior DOD and Air Force managers will have a single location to visit when needing information updates on bar code and optical image technology used in Distribution Management, Inventory Control and Health Care Records and Specimen Tracking systems.

Combining the Air Force Systems Command and Air Force Logistics Command into the Air Force Materiel Command lends greater importance to the LOGMARS Technical Awareness Center. This single location will be keeping pace with changing technology and become a vital knowledge base for weapon system development and follow-on logistics support.

Automated Identification Systems will have a greater impact on our lives. In addition to reducing time in check-out lines and saving money because of reduced costs by retailers and wholesalers, we will be enjoying improved business services. We can expect Department of Defense budget reductions to dictate greater efficiency in our inventory control and asset/record tracking systems. State-of-the-art Automated Identification Systems will play a key role in maintaining a high level of mission support while annual budgets decline.

The future success of the LOGMARS Program Management Office looks good because of past bar code system successes, detailed planning, effective project management, and the combined need of Automated Identification Systems in weapon system development and follow-on logistics support.

the value of the project to the Air Force vs. the cost of system development and implementation. A decision for in-house or contractor development is required for concept approved to become projects.

Base-level projects were realized in supply inventory management, PMEL Automated Management System (PAMS), Automated Materiel Control System (AMCS), Cargo Movement Operations System (CMOS), Au-

RAPID RESPONSE PROCESS

The Acquisition Officer at War

Captain Scott A. Dalrymple, USAF

I always thought that going to war meant carrying a gun, flying an airplane or, at least, living in harsh conditions while supporting these efforts. Many acquisition professionals made contributions to Desert Storm without doing any of these things. As a lieutenant, I often wondered what going to war meant to an acquisition officer. After all, if an officer doesn't have something to contribute to a war, why is he wearing a uniform? Pilots, maintenance officers, communication officers, and many others have a fairly clear concept of what fighting a war might mean to them.

My original perception of wartime acquisition (perhaps shared with others) was that urgently needed systems are procured by a different set of rules. Throw out bureaucracy, issue overriding priority to industry, and concentrate on technical implementation. Pay whatever it takes to get the mission done. I couldn't imagine that the procurement rules and regulations used in day-to-day acquisition had any bearing in a wartime environment.

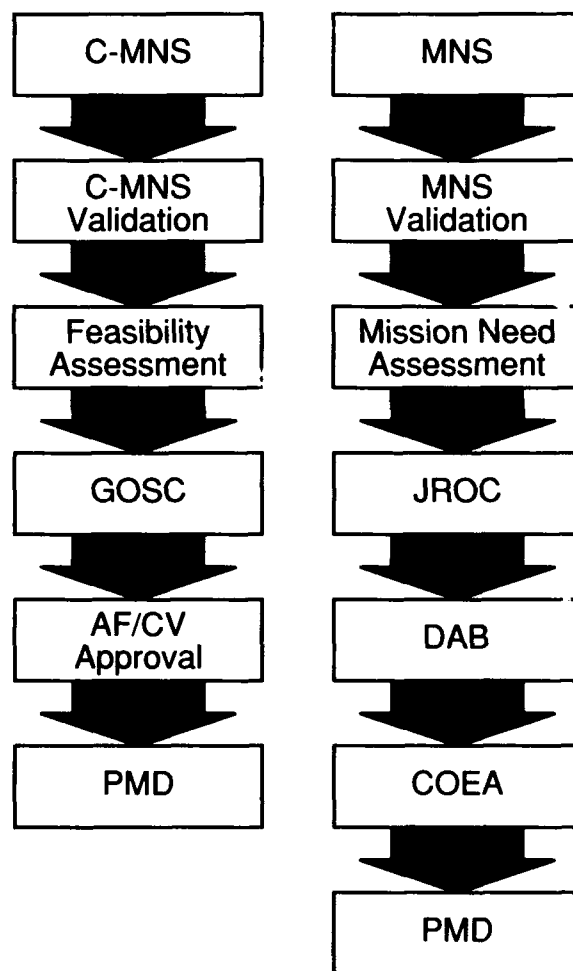
This article will examine a single example of the Rapid Response Process (RRP) used in Desert Shield/Storm to meet an urgent wartime requirement. I will address the guidelines

provided to the acquisition community, how they affected our acquisition, and some recommendations on how this process might be improved the next time the RRP is activated.

RRP Guidance

On September 29, 1990, the Air Force vice-commander issued a message to all U.S. Air Force (USAF) major commands describing the process to be used when "responding to time urgent acquisitions related to Desert Shield." All of my previous misconceptions about wartime acquisition were challenged as I read that its purpose was to "streamline the existing process (AFR 57-5) for Desert Shield operational requirements...while paying adequate attention to cost, reliability, operability, supportability and training...." This didn't seem very different from business as usual. If that wasn't enough, it continued "The RRP does not, I repeat, does not replace the normal requirements validation or acquisition processes: it places emphasis on expediting the existing

FIGURE 1. RRP Vs. Standard Requirement Review

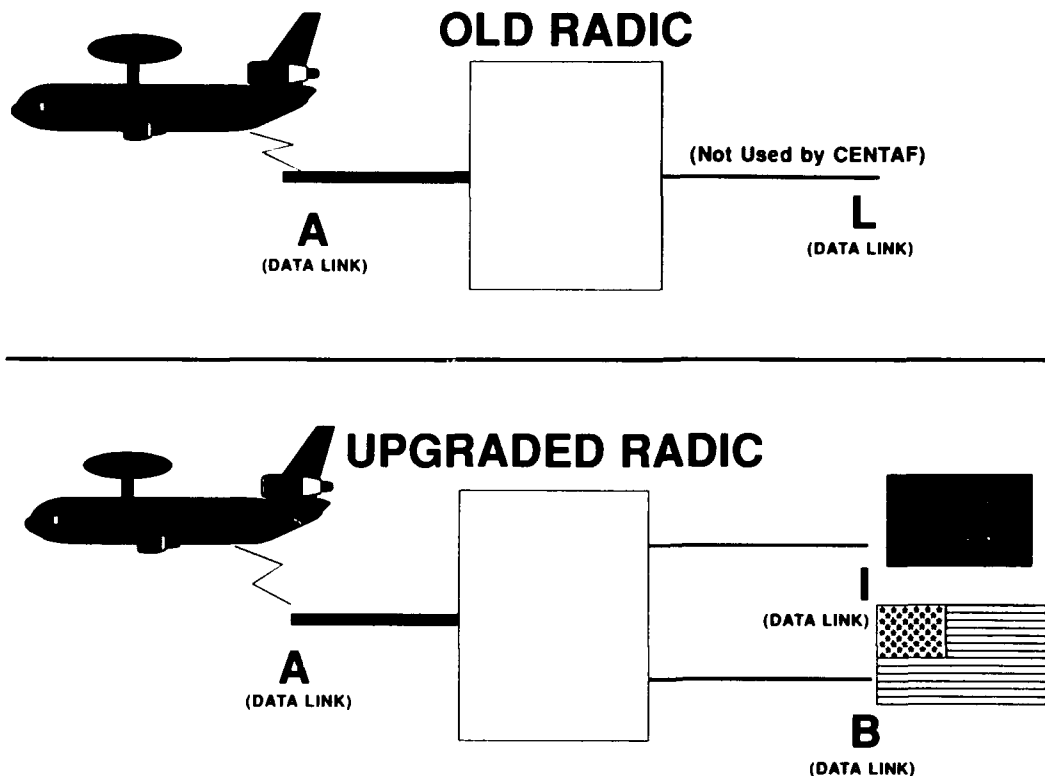


process...." It outlined the following process:

- The operating command (CENTAF) issues a Combat Mission Need Statement (C-MNS) which provides a description of the operational deficiency.
- An *ad hoc* Special Action Team

Captain Dalrymple recently graduated from the Air Force Institute of Technology and is reassigned to the Space and Missile Center in Los Angeles.

FIGURE 2. Old RADIC Vs. Upgraded RADIC



The CENTAF requirement involved expanding the RADIC capability to "speak" and translate different data-links so that mission controllers could share air pictures with more units in the joint environment (see Figure 2). This implied the upgrade of both hardware and software upgrades to the computer, as well as changes in the maintenance capability.

Rapid Response Process (RRP): The RADIC Upgrade Special Action Team convened October 24, 1990. The recommendation to proceed with an upgrade was provided to Air Staff and

(SAT) is formed and prepares a feasibility assessment within four days of receipt of the C-MNS. The assessment is required to address the following areas:

- Can the solution be fielded quickly (6 months or less)?
- Can it be supported?
- Is it affordable?
- Is the risk acceptable?
- Within five days after completion of the feasibility assessment, the SAT will brief the General Officer Steering Committee (GOSC) specially formed for Desert Shield. The GOSC will then provide a recommendation to the Air Force vice-commander for approval of the program as an RRP program.
- If approved, a Program Management Directive (PMD) will be issued the next day to the assigned acquisition agency (Air Force Systems or Logistics Commands).

You may note a familiar flow in this process. Peacetime requirements

follow a similar, though more time-consuming, process (see Figure 1). While a peacetime requirement often takes a year or more before issuance of a Program Management Directive, the RRP was designed to issue one within one week!

CENTAF RADIC Upgrade

On October 18, 1990, CENTAF issued a Combat Mission Need Statement requesting an immediate upgrade to their Rapidly Deployable Integrated Command and Control (RADIC) system. At the time, I was assigned to Electronic Systems Division (ESD), Hanscom Air Force Base, as the RADIC program manager. The operating command used the RADIC as a portable "set of eyes" to see the air picture transmitted by the E-3 Airborne Warning and Control System (AWACS). The RADIC system comprises a computer (about the size of a rolltop desk), and several cases of communication equipment. As the name suggests, it is very portable.

Tactical Air Command (TAC) representatives the next day and provided to the General Officer Steering Committee on November 2, 1990. The Air Force vice-commander approved the RADIC upgrade on November 5, 1990, and a Program Management Directive was released November 6, 1990. These RRP steps were implemented, as directed in the guidance message, with little deviation. Each step provided meaningful input to the process and contributed toward the probability of success.

The Special Action Team consisted of a small group of individuals, each with different areas of expertise or types of involvement with the RADIC. There were two main objectives: 1) to determine if a RADIC upgrade was the best means toward satisfying the user's stated requirement; 2) assessing the technical and programmatic risk of such an upgrade. The Special Action Team concluded that a RADIC upgrade, which implemented two of the requested three new types of data

links, would fulfill the mission requirements (there were other alternatives to gain the third link) with reasonable risk. Three areas of risk were identified: hardware development, software development, and schedule. It was decided that the most significant risk was schedule. The greatest contributor to this risk was the development of the software. We believed that the contractor could develop the new software, but we were unsure if they could develop, test, and field an estimated 10,000 new lines of software code within 6 months.

Activities at the Air Staff focused on drafting a basic acquisition strategy in preparation for the General Officer Steering Committee. This strategy involved assigning roles to the various commands and further defining the task, cost, schedule and risk. A significant contribution made by the role-assignment activity was the designation of a Tactical Air Command representative as technical advisor. This ultimately resulted in the assignment of two advisors, one from TAC headquarters and one from an operational unit. The headquarters advisor helped obtain necessary support and priority from TAC organizations. The operational advisor, a RADIC operator, spent the majority of his time at the contractor's facility monitoring the system development. Closely coordinating with the program office, he was able to aid the contractor in maximizing the systems utility to the user.

The General Officer Steering Committee reviewed the acquisition strategy on November 2, 1990, and was satisfied with the approach. The most significant issue raised was testing. Tactical data links are very sophisticated. There is a high probability that significant errors will exist in new software code implementing these types of links. A data-link software error could result in providing the wrong information to battle commanders (worst case might mean reporting a friendly aircraft as an enemy). Typi-

cally, any new tactical data-link software that is going to be used operationally, by any of the Services, is required to undergo extensive joint testing. This requires months of coordination and planning. The General Officer Steering Committee directed that, at a minimum, some type of operational test be conducted to provide Tactical Air Command and the Operating Command confidence that the new system was suitable for operational use.

This direction was significant, not because of the testing requirement (other agencies would have eventually forced that requirement), but because it provided early emphasis on the issue. We were required by the Program Management Directive to award a contract by November 15, 1990, nine days after its issuance. It is possible that without this guidance we would not have contracted for the appropriate level of test support, both in test planning and conduct.

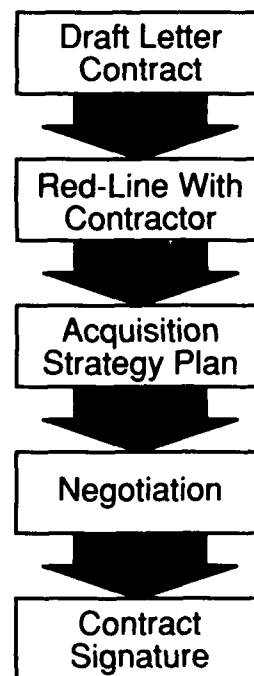
The progressive steps of the Rapid Response Process, like those in the standard requirement/acquisition development process, "evolved" the urgent requirement into a structured program. The process is fast; designed to contract in less than a month. But the process is also bureaucratic, by definition. Bureaucracy is defined as "Government marked by diffusion of authority among numerous offices and adherence to inflexible rules."² This is exactly what RRP does, provide a roadmap through numerous agencies and procedures. Bureaucracy also is often considered to be synonymous with "red-tape," "hassle," and "slow." But well-structured bureaucracy can be "value added" to the effort. Stopping at the right times, to talk to the right people, can save time on a program schedule.

Contract Development: By the end of November 2, 1990, the day of the General Officer Steering Committee, we were fairly confident our program was going to be approved by USAF/

CV. We began preparations to execute a contract. We had some contact with the RADIC contractor, who, in turn, had started preparing a proposed Statement of Work (SOW). Our strategy was to develop a Letter Contract by November 15, 1990. A Letter Contract is, by definition, undefinitized and can be as simple as a one-page letter directing a contractor to start work with details to follow. This is, of course, the most risky approach, providing no assurances other than that money will be spent. Our plan was to develop the most complete contract possible within the short time available. We met with the contractor on November 6, 1990, to discuss the first draft of the SOW and the overall contracting approach. While meeting with the contractor, we were informed by our office that an Acquisition Strategy Panel (ASP) had been scheduled for the next day.

An ASP typically involves about a month of preparation; however, we briefed the RADIC Acquisition Strategy Panel the next day, about six hours after de-planing a cross-coun-

FIGURE 3. Letter Contract Development



try "red-eye." My original impression was that this was just going to be a formality, to let the Electronics Systems Division (ESD) senior executives see what we were doing. After all, hadn't we received all necessary guidance and approval from the GOSC? Instead, a thorough, if not well prepared, review of the program's technical and programmatic details was conducted. We were provided with guidance in a number of areas.

The most significant was the direction to use a "Cost Plus Fixed-Fee" (CPFF) contract type. This might seem an obvious conclusion to anyone reviewing an academic guide that compares contract types to risk. However, at that time Firm Fixed Price contracts were used almost exclusively in our area of system acquisition. We had assumed that it would also be mandated in this case. I can state with confidence that the decision to use a CPFF contract type was the single greatest pre-contract contribution to program success. The CPFF contract type provided us with the necessary flexibility to make changes as requirements were clarified or changed.

The contract development process we followed is illustrated in Figure 3. Again, we can see a parallel to the normal business process. By contract signature on November 15, 1990, we had developed 1) a SOW, 2) a Technical Requirements Document (TRD) in lieu of a specification, 3) a Contract Data Requirements List (CDRL), and 4) Sections B through J of the contract.

Funding: In order to sign a contract, we needed funding. Our Program Management Directive provided a funding authorization level, but not funding. Initially, we thought funding would be provided from Air Staff through a separate document. But, it soon became clear it was going to be necessary to work with the Electronic Systems Division's funding community and find money at that level.

First, however, we had to determine the amount and type of funding required. This involved three steps: 1) reviewing the latest cost estimate, 2) determining the types of funding required for each effort, and 3) determining who was required to pay for these efforts.

The first two efforts required that we develop a cost estimate against the gross level tasks and then to justify the "color" of money required for each task.

The second task involved separating the development/fielding tasks from the spares tasks. By regulation, spares have to be funded by the Air Force Logistics Command. We were still required to "play by the rules." This resulted in the first fragmentation of the contract. To ensure that development could proceed even if the spares funding was not immediately available, we made spares an option to the contract.

It also was determined that the two "colors" of money authorized, research and development appropriations (3600 funds) and procurement appropriations (3080 funds), would not be enough. Spares that cost less than \$15,000 per unit are called expense spares and must be funded using operations and maintenance money.³ It became necessary to arrange an adjustment to our funding authorization.

Contract Definitization: Both the contract development and some of the funding issues (cost estimate and funding allocation) were worked before contract signature. After the signature of an undefinitized contract, it is necessary to definitize the contract (make it "real") as soon as possible. This meant going back to the beginning and reviewing each section of the contract, rewriting areas that needed correction, clarification, or the addition of requirements. Once the review is complete, the program office provides the new contract pack-

age to the contractor to develop a cost proposal against it. The contractor's proposal undergoes program office technical evaluation. Completion of the definitization process must happen quickly.

Federal Acquisition Regulations (FARs) require that before the contractor can spend above 50 percent of the contracted Not-To-Exceed (NTE) price he must stop work and submit a request to the procuring contracting officer (PCO) to proceed.⁴ This threshold was raised to 75 percent for all Desert Shield programs.

In our case, the contractor was poised for fast action prior to contract award and released nearly all of the material purchase orders immediately after contract signature. Consequently, the contractor reached his threshold within several weeks of contract award. Local contracting authority was granted authority to set new thresholds for Desert Shield programs; however, such requests must be scrutinized carefully. With only a letter contract, there is always a risk that portions of the contract might be misinterpreted, and our money misspent. In fact, our definitization process uncovered many misinterpretations in contract requirements. Types of misinterpretation ranged from confusion concerning the number of copies of reports the Contract Data Requirements List required for delivery, to the actual number of RADIC units required to be delivered.

Before a definitized contract can be negotiated, the program office was required to develop and obtain approval for an Acquisition Plan. The goal of an Acquisition Plan is to baseline the overall contract strategy. Through the process of developing an Acquisition Plan, you are forced to examine what you are procuring, why, and how. By obtaining approval, you place your strategy under the scrutiny of various experienced specialists. Typically, you are required to have an approved plan prior to release of a request for proposal (RFP).

In our case we attempted to seek a waiver from the requirement for an Acquisition Plan. We had two basic concerns:

—We were already on contract. The “what, how, and why” of our acquisition were no longer flexible. Our strategy had been approved at the Acquisition Strategy Panel and development of the Acquisition Plan would only summarize the program’s decision history.

—Our program was on a “fast track.” Contract work was constantly under the threat of being stopped due to the spending thresholds discussed above. Any added delay to contract definitization could result in a day-for-day slip to the schedule.

Despite these concerns, we were required to develop an Acquisition Plan. I considered this to be the least “value-added” effort of the program.

Recommendations

Having experienced a rapid response program once, I would propose that the next time the RRP is activated several revisions be made.

—Coincident with activation of RRP, a single focal point should be assigned at Air Staff. The focal point would provide consistency among programs. Lessons learned from one program might be available to others. In the case of Desert Shield RRP programs, we were not aware of which other programs were undergoing the same process. It is likely that other programs also dealt with issues like shipping material into a war zone, obtaining industrial priority, and preparing contractors for chemical-gear training. A focal point would be involved with seeking solutions to some of these problems and could share the results with other programs.

—Provide authority at the program-director level to grant waivers from some of the bureaucracy. The criterion for decision-making

should be: “Do those things that add value to the process.” Of course, you can not predict the future and know with certainty what is help and what is hindrance, but comparing the intent of a process to your goals could make this criterion usable. For example, in our case, it was predictable that the development of an Acquisition Plan would add no value. The Acquisition Plan should have been waiverable. We had passed the stage of such a document being useful. The ASP and contract definitization were also bureaucratic, but the intent of planning for, and clarifying the contract, was appropriate and did add value.

Conclusion

Our program was successful. Even more successful was the conduct of the Allied Forces in the Middle East as they concluded the war before we met our scheduled completion. Despite the war’s conclusion, the upgraded RADIC system was still considered necessary and one of the three systems was deployed on schedule. The effort to complete the remaining two systems was slowed to trim costs. The operational system tests exceeded expectations.

My original belief that we would “throw out the bureaucracy” in an effort to support a war effort was based on the assumption that bureaucracy held little value. This is not necessarily the case. Processes are not (or should not be) developed for the sake of the process but for the sake of adding value to the system development. Likewise, a fighter squadron does not perform war exercises for the sake of the exercise, but because they add to their warfighting capability. We are constantly reminded during peacetime that we do not have unlimited resources to procure systems. The same constraint applies to wartime. We never have had unlimited resources to fight a war. Cost

savings and cost control are just as important during a war as during peacetime, if not more.

How does an acquisition officer prepare for a wartime acquisition? He learns acquisition.

Endnotes

1. HQUSAF/CV, “Responding to Time Urgent Acquisitions Related to Desert Shield,” Electronic Message, 282247Z September 1990.

2. *The American Heritage Dictionary of the English Language*, 1969, p. 177.

3. Department of the Air Force, *Acquisition Logistics Management*, AFLC/AFSC Pamphlet 800-34, April 13, 1987.

4. *Federal Acquisition Regulation*, Letter Contracts, Application, Paragraph 16.603-2D. 1990.



DEFENSE ASSOCIATIONS TO AFFILIATE

Leaders of the American Defense Preparedness Association (ADPA) and the National Training Systems Association (NTSA) signed a memorandum of understanding in August that is expected to lead to their early merger.

The Presidents of ADPA and NTSA, Lawrence F. Skibbie and J.C. Williams, said “This affiliation is an indicator of the future in the defense association business. As the defense industry restructures and consolidates, so too must the supporting associations.”

PROGRAM MANAGEMENT NEVER HAPPENS LIKE MAGIC



Successful program management is more difficult than pulling a rabbit out of a hat. It requires a solid education in defense acquisition. The Program Management Course at DSMC is available to qualified civilians and military, as well as defense industry personnel. It's more than just a business course. Lectures and activities are geared toward specific problems, situations and procedures that are particular to the DOD way of doing business. Call our Registrar at (703) 805-2227 or DSN 655-2227, or your CODSIA representative; military, call your personnel officer.

TESTING IN THE ERA OF EXPEDITED DEVELOPMENT

A Welcome Change

Dr. A. N. Hafner

The Navy has come full circle with its move to adopt commercial testing practices of Alpha and Beta testing. This is a welcome change, both as a means to shorten the development cycle, and a method of accommodating the particularly unique needs of the military.

The Navy needs to accommodate commercial off-the-shelf (COTS) and nondevelopmental item (NDI) purchases of limited scope systems. Such purchases must be accredited before they are introduced into the more extensive Navy systems environment. This need alone fully justifies and, indeed, mandates an Alpha-Beta approach.

Intensive product testing by the developing agent was once the rule in the systems development arena. Unfortunately, this self-policing was prostituted when some program managers misinterpreted the meaning of mid-development failures. This often led to prematurely cancelled programs and unjustified scaling back of what were essentially productive efforts.

Overly candid developmental testing soon became a shibboleth that no

Doctor Hafner is a research scientist with Systems Exploration Inc., and a professor in computer science at the Jan Jacinta (Calif.) Community College.

**ALPHA
T E S T**

manager would risk. Testing at the contractor's development level became a protected, sub-rosa activity, a defensive mechanism confined entirely inside the plant and seldom acknowledged to the customer. Thus was born the cycle of military development testing (DT) and operational testing (OT) which so burdened the development stream that it is now being replaced. Pressured to improve its developmental timeliness, the military is apparently moving toward the commercial paradigms for product assurance.

There is another basis on which such a shift can be justified. As reported in my article, "New Models, New Methods," *Program Manager*, May-June 1992, p. 26, intensely competitive and smaller development teams are using Object Oriented programming techniques and client-centered analysis methodologies to respond quickly to emerging operational requirements. As observed, these prototypes encompass only a part of any large-scale Navy requirement. They must be integrated into the larger, mainstream Navy systems if they are to be organizationally acceptable. The new Alpha-Beta test technology answers this need admirably.

This proof of an emerging technology, or of a prototype device, requires a combination of testing and demonstration that is characteristic of full-scale development but which is applied on a more compacted scale.

As with any system that is adopted for use, accuracy and reliability of the technology products must be certified to preclude mission critical failure. At the same time, its operational validity must be demonstrated to assure its easy introduction into current activities.

Alpha testing, as currently used by its Navy proponents, appears to imply a subset of the detailed test techniques that were commonly practiced as development tests; e.g., verification, white-box testing, metric testing, D/T, etc. These tests assure veracity of the code (and technology) and ensure that it does not introduce spontaneous aberrations into the processing stream. Beta testing, on the other hand, incorporates the operational test venue; e.g., OPEVAL, "black-box" testing, validation, field testing, factory acceptance testing, etc.

As has been observed, these two domains are comparable to the test practices of commercial manufacturers. However, to be useful to Navy development, adherents to these testing practices must also adopt the interpretations which the business practitioners place upon them. In contemporary commercial practice, the concept of Alpha testing incorporates the understanding that a certain number of errors are to be expected and that the purpose of the test is to uncover them for corrective action. Likewise, Beta testing (which is a review by a totally independent organization) must also acknowledge the strict ethic of confidentiality that is currently being practiced in the commercial arena.

The NRaD's ATD demonstration methodology is anticipating applying both Alpha tests and Beta testing. In the case of the former, detailed test modules are being prepared to measure the timeliness, accuracy, reliability, and efficiency of the ATD subsystems and its components. These tests will usually culminate in a rigorously controlled development test.



Additionally, a comprehensive demonstration of the operational and practical performance of the ATDs is generally planned for the Dam Neck Systems Validation Center (DSVC). These "beta tests" will be scripted exercises that highlight all of the ATDs strengths and which acknowledge the weaknesses known to exist because of the Alpha testing. This will be followed by a real-time demonstration which applies the ATD product to actual surveillance conditions. This sequence of OPEVAL-like tests augments the Alpha tests in the compilation of a comprehensive list of P3I tasks. The corrective actions required by the P3I tasks will be scheduled in advance of, or coincident with, inser-

tion of the products into the Integrated Surveillance System (ISS).

Application of the Alpha-Beta test philosophy by NRaD provides an opportunity to evaluate the new testing concept. With a slightly increased investment, dedicated to documentation and control of the process, an evaluation of the new processes could be effected. As a concept validation study, this review of the progress of an NRaD ATD would be a valuable contribution to Navy developmental practices.

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DESIGN REVIEWS

It's Your Choice

Commander R. Kenneth Crowe, USN (ret.)

A design review is an evaluation whose objective is determining technical adequacy of the existing design to meet known technical requirements. The evaluation occurs through efforts and communication of the government and the contractor. Communication is the key to conducting a successful review. This communication occurs through a series of actions: a) commitment, b) planning, c) training, d) preparation, e) execution, and f) follow-up. A good review requires a commitment to good communication and a plan for the communication to take place. Training of participants may be required. The conduct of the reviews is dependent on preparation, disciplined execution and follow-up.

Commitment

The choice to have a successful review begins with a single, critical action. That action is the commitment to make the review an evaluation through communication rather than a symbolic check point. The temptation exists to view the technical review as a check point to release money, fill in a triangle on a milestone chart, or as a political expedient to show progress whether progress has occurred or not. Inclusion of the

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technical reviews in Milestone documentation, as required in DOD 5000 series, attracts attention to the program. This attention for some programs, particularly those with a success-oriented schedule, makes the passing of reviews

essential. This success-oriented philosophy creates pressure to complete a review regardless of the maturity or capability of the design. Problems allowed to continue beyond the technical review can cost a factor of 100





A. Commitment

The Review as
a Ticket Punch

R

B. Planning

Letting the Review
Happen

R

**Making the Review
Happen!**

C. Training

Assume Everyone
Knows What to Do

R

**People Understand
Their Responsibilities
and Are Capable
and Confident**

D. Preparation

People Show Up
and "Try to Do
Their Best"

R

**Responsibilities
Understood
Tracked and
Coordinated**

E. Execution

Cast of Thousands
Dog and Pony Show
Booooring!

R

**Solutions
Formalized
Documented**

F. Follow-Up

What Did We
Decide
About That?

R

**Action Items
Documented and
Resolved**

or 1,000 times the cost for corrections made early in the program life cycle.

There should be a commitment to make the reviews of frank and honest appraisal of the design and the re-

quirements. A review is not a "shoot out" where participants have the attitude of "I'll show them," which must be examined against the final results. While impassioned speeches and antics may boost the ego and entertain, this approach may broaden the gulf between government and the industry contractor and an increased lack of trust and willingness to share. Reviews should examine and formalize analyses of performance, schedule and cost parameters that have been discussed. Analysis should allow the technical maturity to be challenged in a positive way.

There should be a commitment to no surprises. Reviews aren't the time for surprises for government or con-

tractor traceability of designs and decisions to verify a requirement wasn't lost or misunderstood in the rush to get the job done.

Planning

Successful communication usually does not take place by accident. The successful review begins with a good administrative plan. The plan should identify the resources (people, facilities, support, and funding required), schedule, procedures, responsibilities and reporting.

Getting the resources early enough to make a difference is critical. As an example, if an expert is needed to cover a specific risk area in a techni-

cal review, that expert needs to be part of the team long enough to understand the program and the program strategy. Travel money spent for competent experts is frequently the best investment available to the program but is frequently the most difficult to get. These travel funds need to be set aside and defended from potential cuts.

The scheduled information flow (both ways) and examination needs to occur in time to support the technical review. The government should be uncompromising in requiring the data ahead of the review with sufficient time to examine the data in detail. As examination takes place, the progress of the examination should be tracked to be sure the work is being done. The government should be equally responsive and responsible in clearing up those to be determined (TBDs) that depend on government decision and clarification.

Procedures for the activities prior and during the review need to be established and issued. Questions will arise during the examination of the data package. These questions should be passed to the government for understanding, and to contractors for developing alternatives and explanations.

Many people (engineering, logistics, software, users, testers, specialties) get involved in reviews and their preparations. Involving these stakeholders is an essential part of the planning process. The responsibilities of all involved should be delineated to avoid overlooking areas and to limit duplication. Those who are involved or will be involved in the development of the program need to be identified and educated on the program and the review process. While it is important to have specialty areas represented, it is also important the representation of the specialty not be done in ignorance of the program. Neither should that representation provide a different government voice to the contractor.

Outline for Review Planning Document

- | | |
|---------------------------------------|--|
| 1. Introduction | 5.1.2. Scheduling |
| 1.1. Purpose | 5.1.3. Plan Modifications |
| 1.2. Objective | 5.1.4. Team Selection |
| 2. Program Summary | 5.1.5. Guidelines |
| 2.1. History | 5.1.6. Entry & Exit Criteria |
| 2.2. Contractors | 5.1.7. Planning Meeting |
| 2.3. Requirements | 5.2 Training |
| 3. Procedure | 5.2.1. Planning Meeting |
| 3.1. Evaluation Approach | 5.2.2. Selection of Attendees |
| 3.2. Schedule | 5.2.3. Selection of Trainers |
| 3.3. Teams | 5.2.4. Training Schedule |
| 4. Responsibilities | 5.3. Preparation |
| 4.1. Executive Steering Committee | 5.3.1. Scheduling |
| 4.2. Reporting and Tracking Structure | 5.3.2. POC for Data Receipt |
| 4.3. First Team | 5.3.3. Classification of Errors |
| 4.3.1. Members | 5.3.4. Tracking Reports |
| 4.3.2. Leader | 5.3.5. Agenda Preparation |
| 4.3.3. Data/Pubs to Review | 5.4. Execution |
| 4.3.4. Evaluation Results Reporting | 5.4.1. Structure of Steering Committee |
| 4.4. Second Team ETC. | 5.4.2. Responsibilities |
| 5. Phases | 5.5. Follow-up |
| 5.1. Planning | 5.6. Administration |
| 5.1.1. Responsibility | 5.6.1. Forms |
| | 5.6.2. Notebook |
| | 5.6.3. Schedules |
| | 6. Appendices |
| | 6.1. CDRL Delivery Schedule |
| | 6.2. Organization Chart |
| | 6.3. Meeting Plans |

The government must speak with one voice to the contractor. Part of establishing responsibilities and speaking with one voice is control of who attends. Control of attendance involves scrubbing the nonessential and the unprepared while adding the engineering specialties required.

Reviews should help reduce the risk equation. The activity of planning and preparation for the review should highlight the key risk areas and schedules for the appropriate allocation of time and resources.

Training

In addition to planning for success, it is also necessary to train for suc-

cess. The training should cover the objectives of the review and the requirements of the program. Establishing joint training for stakeholders, including the contractors, will provide a basis and opportunity to forge informal communication links and surface problem/concerns that might not come out in a more formal meeting. Training should enable a more focused review. The training must be tied to the entry criteria for holding the review and the exit criteria for successful completion of the review. The goals of the training should not only include understanding the entry and exit criteria, but also understanding the risks associated with the program and the responsibilities of everyone involved.

A Training Example

An army program elected to train for an upcoming Systems Requirements Review. A 2-day training period was planned. Resources required reservation of a large room and breakout rooms, travel for stakeholders and contractors, and the use of facilitators.

A planning meeting was held to focus the activities and to ensure the training and expectations matched. Program office personnel were used as participants in a Nominal Group Technique (NGT) process to demonstrate the training and to identify the training objectives and the risk areas which should be addressed in the review. A cross representation of contractor personnel, an independent tester and the user were specifically invited to the training.

An initial period of general instruction in the nature of reviews and a briefing of the contents of the administrative plan for the review set the stage for breakout groups with individual involvement. The individual involvement tended to help fix the principles in the minds of the participants and to prepare the way for

making the training specific to the review and the program.

Facilitators were identified and the techniques of NGT were coordinated to achieve uniformity of products from the breakout groups. This particular training exercise selected an individual from each group to document and to brief the results of the breakout group to the entire training group. Had sufficient resources been available, a better approach would have been to provide a dedicated recorder for documentation of the ideas and the meanings to support the presentation by the breakout group.

A final part of the training planned was using a panel of "old codgers" with experience in technical reviews. The panel comprised the program manager, chief engineer, user, and the program manager for the prime contractor. These people were given a chance to pass on any specific wisdom they had. After these comments, the floor was thrown open to questions. This period helped to reconfirm the lessons learned through lecture and experience, and served to provide confidence to the those conducting the review.

Preparation

Preparation precedes success and is necessary for the successful review. As the review plan is carried out, most of the work and most of the value of a review is in the preparation. Preparation involves individual review of the data package and preparation of the results of the analysis. During this period, the progress of the individuals should be tracked.

Execution

The small-group reviews should be led in a positive way. The pace needs to cover the most crucial data to re-

solve risk. Errors must be classified regarding severity and recommendations developed for the decision-makers. Minutes of the meetings should be comprehensive to reflect the work and concerns of the examination of the data packages. The *Design Reference Guide for Design Reviews* provides an excellent "how to" for the review process.

Follow-up

In the execution of the reviews it is necessary to make it happen instead of letting it happen. Planning, training, selecting, getting data, reviewing, tracking, communicating and coordinating

are crucial. Creating and using an administrative plan for the review will provide for success. There are numerous publications available to assist in the preparation and execution of reviews. The MILSTD-1521B, MILSTD-973, DODI 4245.7M, "Risk Templates"; and the soon-to-be-published *Design Reference Guides* (and expanded follow-on to *Best Practices*) contain valuable information and lessons learned.

Summary

Successful reviews result from a planned dedicated effort on the parts of the government and contractor. This effort requires commitment, planning, training, preparation and execution and follow-up. Having an on-time review and few issues is not necessarily a successful review. The measure of success is the ability of the design to meet the user requirements in a cost-effective manner. Help is available through various publications. The successful review results from putting forth the effort, using the tools and making the choice for success.

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BEST VALUE CONTRACTING

Debunking the Myth

Janice M. Menker, CPCPM

Buzz words often are used to describe acquisition processes and provide validity to an otherwise mundane process. Such is the case with "best value" contracting, a '90s term to describe a process used by the Department of Defense (DOD) since the 1970s. This article will debunk some of the myth surrounding best-value contracting and provide a template for using this strategy to buy quality goods and services for the armed forces.

This is the first of a two-part article. The second will specifically explore the evaluation methodologies in applying best value.

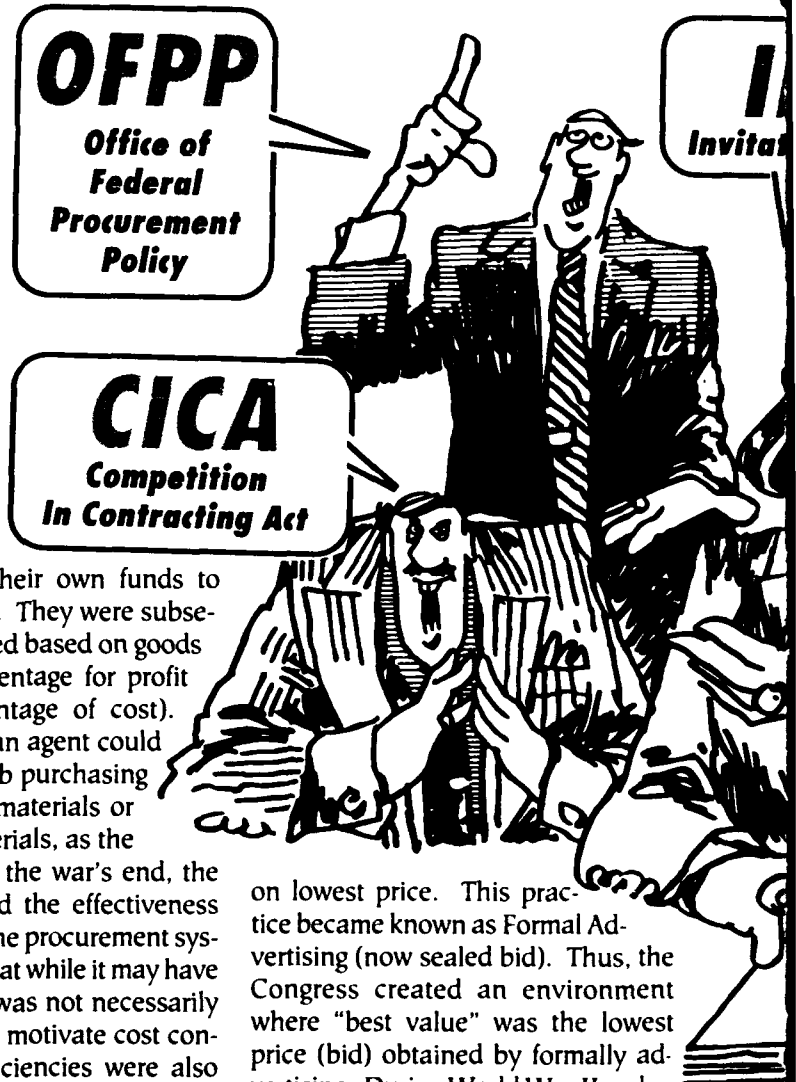
Background

During the Revolutionary War each independent colony competed for the resources needed to sustain that colony's fighting force. General Washington quickly realized competing forces did not make for a unified Army. One industrious colony could easily deplete regional resources, leaving nearby colonies in the lurch and unable to fight. The Continental Congress concluded that General Washington needed the sole authority to procure foods and supplies for all the troops and passed legislation authorizing him to purchase all necessary foods and supplies. General Wash-

ington, however, was fighting a war and had other more important matters on his mind. He chose to appoint procurement directors who, in turn, authorized agents to procure the necessary food and war supplies. These agents purchased from the local economy using their own funds to buy the materials. They were subsequently reimbursed based on goods sold, plus a percentage for profit (cost plus percentage of cost). Needless to say, an agent could easily run up a tab purchasing either expensive materials or unnecessary materials, as the case may be. At the war's end, the Congress assessed the effectiveness and efficiency of the procurement system, concluding that while it may have been effective, it was not necessarily efficient nor did it motivate cost control. Other inefficiencies were also noted and thus was born congressional control over the procurement system through laws, regulations and statutes.

Laws passed in the 1800s and early 1900s focused on controlling how the monies were spent so as to result in the lowest possible cost. Specifically, costs could be controlled through competition and award of contracts based

on lowest price. This practice became known as Formal Advertising (now sealed bid). Thus, the Congress created an environment where "best value" was the lowest price (bid) obtained by formally advertising. During World War II, value took on a different meaning when the Congress authorized the war department to negotiate procurements. Value now meant that tradeoffs could be made among schedule, cost and technical requirements. Value could mean paying more money to meet a schedule (urgency). Negotiated procurement became the norm for the weapons systems and other high dollar



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value, technically complex equipment procured by DOD. It is important to note that before 1984, formal advertising was, by law, the preferred method of contracting. Negotiation authority was an exception, requiring approvals, depending on the dollar value, as high as the Secretary of the Department. The essence or heart of negotiated procurement is "discussions." Negotiation means compromise, and compromise was obtained through a process of dialogue between government and industry. "Best value" then took on a different meaning.

Tradeoffs among technical characteristics, schedule and cost were

FB
ion For Bid



necessary as both parties reached closure on the government requirement, budget constraints, technology constraints, technical complexity, and operational needs through the discussion process.

Time Now

If formal advertising, lowest price means "best value" and negotiated

sole source was also "best value," where is the disconnect? Are lowest price and negotiated price both best value? Given the policies perpetuated by the Congress between 1876 and 1984, both represent best value. The preferred method and preferred "best value" was lowest price.

With the passage of CICA, the Competition in Contracting Act of 1984, the Congress shifted the nucleus of the procurement system from how contracts were awarded (formally advertised vs. negotiated) to a preference for competition. The competitive method of procurement—Sealed Bid, Two-Step Sealed Bid, or Competitive Proposal Procedures—was to be selected based on the nature of the procurement, and the goods or supplies being procured. Sealed Bid and Two Step Sealed Bid require the government to precisely define the goods and service to be acquired with contract award based solely on the lowest price. In fact, if price is the deciding factor, then GAO ruled a sealed bid must be used and there is no opportunity to discuss or make tradeoffs. The Invitation for Bid (IFB) specifies the government's needs, schedules, terms and conditions. The industry submits a price (bid). The contract is awarded to the lowest bid meeting all the conditions set forth in the solicitation, and whose price is realistic and reasonable. Again, value is defined as the lowest price. All quality parameters must be specified in the solicitation.

Competitive proposal procedures, on the other hand, permit the government to tradeoff technical complexity, past contractor performance, management, and cost to achieve the "best value" for that procurement. The Office of Federal Procurement Policy issued a policy letter stating "quality of performance over and above minimum acceptable level will enhance agency mission and be worth corre-

sponding increases in cost" clearly recognizes that greater value for each incremental dollar can be in the taxpayer's best interest. The Department of Defense has been applying the concept of greater value since the 1970s when conducting Source Selections. However, GAO concluded after CICA that unless discussions were held the government must award to the lowest price or cost proposal. Hence, the proliferation of technically acceptable, lowest-price contracts because discussions are time-consuming and value judgments are required. Clearly, GAO communicated a relationship between discussion, tradeoffs, and cost/price as inherent and competing elements to arrive at "best value" decisions, concluding, as did our forefathers, that lowest price is usually best value for the taxpayer.

The current usage of "best value" emerged as the '90s term when using competitive proposal procedures because the Congress, in the 1991 DOD appropriations bill, changed the law. That change recognizes that, while many procurement actions are noncomplex, easily described, and appropriately decided based on price, quality, past performance and life-cycle cost also are major factors to be considered when selecting suppliers. Further, DOD could make the necessary tradeoffs among price, quality and past performance and award the contract without discussion, if it were so stated in the solicitation. Their rationale—industry had become accustomed to discussions as a way of life and used them as another chance to revise their prices via the request for Best and Final Offer process. If industry knew contracts would be awarded without discussions, then industry would submit their best price initially instead of waiting for the BAFO. Therefore, DOD is now required to state in the solicitation one of two conditions: The contract will be awarded with discussions or the contract will be awarded without discussions. If the latter is used and the government subsequently changes its

mind, approval is required at a level above the contracting officer.

Considerations

As stated earlier, the best value may be a technically acceptable, lowest-price offer if all measures of effectiveness and quality standards can be stated in the solicitation and price is the deciding factor for selecting the supplier. The burden is on the government to be specific and precise in describing the procurement. However, where technical complexity, past performance, management issues and quality over and above minimum standards are paramount and more important than price, the best value definition is broadened. In this case, some sort of benefit analysis is needed to support the greater value and worth corresponding to the increases in cost/price. Given the government's burden of proof, industry now has the burden of proof to demonstrate it can accomplish the procurement within government constraints.

Today, best value decisions are determined through a subjective assessment by a Source Selection Authority considering quality, technical characteristics, management approach, price, past performance, life-cycle cost,



or other criteria unique to the particular procurement. Only the acquisition agent/buyer in conjunction with the user can determine the criteria to be applied. The relative value of each

criteria/factor determines their ranking in the hierarchy and, in turn, how the criteria will be integrated. Further, the relative importance between the factors and price must be stated in the solicitation. A major consideration in determining best value is risk—both the proposal risk (can the potential contractors do what the proposal says?) and performance risk (do the potential contractor's records demonstrate an ability to manage risk?).

When implementing best value, the government has the burden to continuously improve the selection process. Improvement begins with careful analysis of the mission needs and requirement to satisfy the need. Next is: How will the contract be awarded? If price is the determining factor then the government must be precise in stating the requirement. If, however, price is but only one of the considerations, what other factors will take precedence and how will the precedence be established? Is the potential contractor's management culture of such value that more emphasis should be placed on that culture? Are the potential contractor's past performance records a necessary element of the decision?

Best value is an assessment of many factors which can include any or all of the following: past performance, ability to meet contract schedule, life-cycle costs, risk management, product/service improvement strategies, responsiveness of company management, supportability, product conformance to functional requirements, reliability and maintainability, contractor strategies to make continuous product improvement, price differential for higher quality, terms and conditions, cost realism, user training, inter-system compatibility, mission configurations, personnel, capital equipment, mobilization and industrial base considerations, and data rights. The program manager, the contracting officer and industry must determine the specific considerations to be applied for a particular procurement to set

A Checklist for "Best Value" Assessment

Past performance	Cost Realism
Ability to meet schedule	Terms and conditions
Life-cycle cost	User training
Risk management	Inter-system compatibility
Improvement strategies	Mission configuration
Responsiveness of management	Personnel
Supportability	Capital equipment
Conformance to requirements	Mobilization
Reliability	Industrial base
Maintainability	Data rights
Product improvement	

the template for deciding which best value criteria are most appropriate.

Improving the Process

The government has the responsibility to clearly and completely define all functional and physical requirements. Remember:

—"Value is a function of meeting valid mission needs."

The government has the responsibility to clearly and completely state all evaluation factors for award:

—"Say what you mean and mean what you say."

Remember, the solicitation is a communication document—written words can have different meanings depending on the geographic location and corporate cultures—so carefully choose your words and do not be afraid to be explicit.

Where possible, allow for both quantitative and qualitative trade-offs between various price, performance, quality and schedule factors. While the decision itself is subjective, quantitative measurements may be appropriate in determining probability of success. The use of all quantitative measurements reduces the decision to numerical scores which may not reflect the relative worth of a proposal. For example, the end use of the item is critical in determining value and ultimate dollars to be paid. Weightings or specific numbers do not always convey that end use or military worth. A difference of a few points could make the difference in whether the war is won or lost. The template must be precise and communicate the what, how and why.

Encourage industry feedback by using Requests for Information and Draft Request for Proposals. Be flexible—the process is a learning experience for both parties. The government needs to be flexible and willing



to listen and incorporate the contractor's comments, otherwise the contractor will quit commenting! The government must avoid a rigid adherence to arbitrarily established requirements. This does not mean deviate. It does mean to listen to one of your customers—the contractor—who may know more about the item than you do. Let the contractors do what they do well—design and build products. Reliance upon design specifications ties the contractor's hands and does not permit innovation and creativity in meeting your needs. Functional and performance specifications give the contractor more latitude in proposing unique solutions and performing the contract.

Summary

Technically acceptable, lowest price has a place in our business. Hundreds,

thousands of items are easily described and can be purchased off the shelf. They are not complex and price is rightly the determining factor in contract award. On a continuum though, as the requirement becomes more complex, as military worth, loss of life is factored in, as safety considerations are keyed in, value becomes a paramount consideration. Best value is no longer restricted to weapon systems, high-dollar value procurement, complex equipment or emergency use. Value is a consideration in all supplies and services. Lowest price may be the best value, but reasoned judgments to achieve an optimum balance among all criteria may also represent best value. However, reasoned judgments require continuous improvement and mean; in addition, debriefing those who did not win the contract by communicating specific reasons for not being selected. In today's budget constrained environment, the next procurement is few and far between—industry deserves to know what they did wrong. As more quality principles are applied to the selection process, and as value decisions are made without fear of repercussion (protests), the quality of the equipment over time will improve.

Ultimately though, better equipment can be provided to the real customers, the men and women of the armed forces who must defend our country with the equipment we purchase. They deserve the best we can provide. It behooves everyone of us to remember that it could be "my daughter," or "my son" using that equipment. Would I want it to be lowest bid or would I want it to be the best that money can buy? I know what I want my son to use!

In the next series, evaluation methodologies both to select criteria and to apply criteria to the decision process will be explored. There will be no right answers but there is lots of room for thought in implementing best value.

NEGOTIATION OF INTERNATIONAL COOPERATIVE DEFENSE ACQUISITION AGREEMENTS

A Case Study

Richard Kwatnoski

"The quality of the U.S. government depends directly upon the quality of the people who serve it. At nearly every level of government, public employees are involved in multibillion-dollar, sometimes life-and-death decisions. The government should concentrate on those things that cannot be satisfactorily performed in the private sector. This includes taking a leadership role in pursuing leading-edge, high-cost research with uncertain or long-term payoff, planning and providing the critical post-use facilities, providing a world class educational system, and sustaining international operations that require a high playing field."

Norman Augustine
Chairman and
Chief Executive Officer
Martin Marietta Corp.

Mr. Kwatnoski is a professor of engineering management in the Executive and Short Courses Division, Defense Systems Management College. He is the director for International Acquisition Courses.

There exists a plethora of information about the generic subject of negotiation. Library shelves are filled with books and articles. Self-help audiotapes offer to reveal the secrets of successful negotiation. Courses abound in both the government and the private sector. Turning to an increasingly important subset—international negotiation—very little is available, even though international negotiation often differs markedly from the domestic variety. Almost all that exists is for the negotiation of business agreements. As for government-to-government agreements negotiation, virtually no information exists, especially for cooperative defense acquisition programs.² One can only speculate about this dearth of information. Is it because there is no economic incentive to publish it? Lack of interest? Our consistently excellent past negotiation results? Or, perhaps, we just do not bother to prepare ourselves when we meet our allies across the negotiating table. You are invited to form an opinion after reading this article.

Every year representatives of the Department of Defense negotiate agree-



It seems Ms. Smith that

ments for cooperative acquisitions with our allies³ totalling many millions of dollars,⁴ with potential expenditures totalling in the billions. These agreements for setting forth the terms and conditions of a cooperative acquisition program are normally called a Memorandum of Understanding (MOU) or Agreement (MOA). Responding to perceived deficiencies in our negotiations, two years ago the Defense Systems Management College (DSMC) instituted a new workshop to train our negotiators, and allow

them to experience a most realistic simulated negotiation. As the workshop director, I recently completed a four-month assignment in the Pentagon on the staff of one of the Military Department's offices of international acquisition. During this assignment, I had the opportunity to observe an actual negotiation for a potential cooperative acquisition program. The purpose of this article is to present these observations as a case study of contemporary government-to-government negotiation activities; and

provide lessons learned and three, fundamental rules for the benefit of future negotiators.

Background on Cooperative Acquisition Program

The nations of France, Germany and the United Kingdom had begun a cooperative development of a new defense system.⁵ The United States, pursuing a similar system development, became interested in the European program. The United States was invited by one of the European nations to explore cooperation. While never explicitly stated, one of the European nations was opposed and the other one was ambivalent to U.S. participation. As U.S. interest increased, the interested Military Department spent \$700,000.00 pursuing the possibility of a cooperative program: \$350,000.00 for a technical assessment of the European development, and \$350,000.00 for travel and support to the exploratory negotiations. This included hiring an expert consultant to help formulate the U.S. going-in position. The United States had determined there would be a significant cost savings in a cooperative program. It also was determined that the European system would meet most of the U.S. requirements, and modifications were possible to totally satisfy our needs.

The United States assembled a negotiating team comprising an SES-level head of delegation and a technical/scientific advisor from the appropriate Service laboratory/center. The program manager, a military officer of colonel/captain (O6) rank, was part of the team. Expert legal advice was provided by counsel from the Service headquarters.

The United States had a funded program, but the priority was not high and support from all elements was not solid. The Europeans had already committed \$250 million for their program. The United States had \$25 million to contribute. If cooperation proved



e American delegation doesn't understand its own rules.

Applying years of personal experience and a vast amount of dialogue with others experienced in government-to-government international negotiations, I proffer these three golden rules.



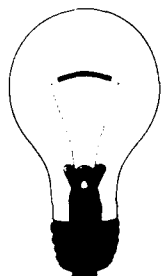
P REPARE

Most international cooperative project agreements are exceedingly complex, often taking years to conclude. Months of preparation are required before serious negotiation begins. Proper team-member selection, team building, and research are essential for success.



E XPERIENCE

Repeatedly I hear of other nations sending the same people to their negotiations. I have witnessed this myself. Unfortunately the United States continues to send inexperienced people. It is essential to select experienced people for the negotiation team, or compensations must be made in other ways.



T RAINING

This is the most ignored rule of all. We have excellent training at the Defense Systems Management College. A virtual mountain of guidance documentation exists to assist our negotiators. Yet my experience is that most of those who take advantage of the training do so after experiencing the difficulties of flying blind through a negotiation. Over and over I hear students say: "If only I knew this before I negotiated, I would have done things very differently."

impossible, there was not enough funding for the United States to go-it-alone.

Tactical Errors

The United States was invited by the European participating nations to attend several negotiating sessions, and present its proposal for participation in the cooperative program. The U.S. delegation went to several meetings at European locations. Because of my Pentagon assignment, I went to one of the early exploratory negotiations as an observer.

I was in a unique position in that I could focus on the form of the negotiation, rather than be distracted by the technical content issues. Just prior

to the negotiation, it was learned that the U.S. team had never heard of DSMC's workshop in international negotiation nor were they aware of DSMC's guidebook for assisting U.S. negotiators.⁶

The following tactical errors were observed during the negotiation session:

—*Narrow, Inflexible Position:* The U.S. point of view was that the Europeans would be delighted with the U.S. contribution of \$25 million — "found money" that could be used for additional project purposes. However, the Europeans viewed this as only a ten percent contribution to the program

research and development costs. This was unacceptable, since the United States would require equal rights in virtually all aspects of the program. In fact, one European national delegation was very clear in their belief that the United States, once a full participant, would dominate the program in pursuit of its own interests. The United States held to its view on funding without presenting any other options. We appeared to have no fall-back positions worked out in advance of the negotiation. Our position was never presented in a total program (life cycle) context. Production offtake and follow-on support benefits/tradeoffs were never presented.⁷

In short, the Europeans did not need the U.S. contribution, and saw disadvantages to our participation.

—*Failure to Control Information:* The United States revealed its lack of an alternative — there was no competing U.S. development program, only a product improvement to an existing system. This clearly weakened our position. The United States also stated that additional funds could be requested. While it was noted that success was unlikely, it still opened the possibility. Not surprisingly, the meeting ended with the European position that a trans-Atlantic cooperative program was not possible until the U.S. delegation requested and obtained the additional funds to come up to a full 25 percent contribution level.

—*Body Language Told a Lot:* The weakness of our position was also revealed and reinforced by the body language of the U.S. delegation. Nervous laughter, excessive perspiring, and a general appearance of a lack of confidence gave away much of our position. Interestingly, one other national delegate also revealed his prejudices with his body language. This delegate appeared grim and refused to look at the U.S. delegation until we revealed that we had no alternative development program. For the remainder of the session, he was most cordial to the U.S. delegation.

The U.S. delegation returned to Europe for one last negotiation about a month later. No additional funds were forthcoming. The Europeans held firm to their position, and the United States withdrew from further negotiation, although the Europeans inquire periodically about the status of the U.S. technical effort. All of the tactical errors discussed above, as well as many others, are clearly addressed in



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Lessons Learned

There are several lessons learned from this experience which may be of benefit to other U.S. negotiation teams during the early exploratory stages of a potential cooperative acquisition.

—*Spending a large sum of money to support a negotiation does not ensure success.* At least

\$700,000.00 was spent during the exploratory negotiations for support and technical assessment. There was no indication of a lack of funds to repeatedly send a four-person team across the ocean to negotiate. Funds were available to hire an outside consultant. However, the U.S. commitment to actually fund the development was in question.

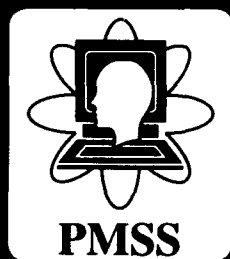
—*High grade/rank with technical expertise does not ensure success.* The team was headed by an SES-level civilian and included a military officer at the O6 level (the program manager). The technical and legal expertise of the team members was apparent. The knowledge of at least one of the team members in international acquisition programs was superb. The team structure was textbook excellent.

—*Expert contractor support does not ensure success, especially if he/she does not attend the negotiation.* The consultant employed to help formulate the initial U.S. approach to cooperation was an unquestionable expert in the field. However, the consultant was employed in the beginning only; He neither attended any negotiation session nor reviewed results. Consequently, the U.S. team appeared locked into a narrow, inflexible position. The use of an expert consultant could be of significant benefit, but he/she should probably be retained in some capacity throughout the negotiation.

—*The word is not getting to the right people about DSMC education, publications and consulting for improving negotiation results.* The DSMC's Advanced International Management Workshop has been in existence for more than two years, yet the people actually negotiating are not attending in sufficient numbers.

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Concluding Remarks

It is a well-known fact that people retain visuals much better than written text. Therefore, I propose a visual that I hope the reader will retain after the words contained in this article are long forgotten. Examine the three golden rules of international negotiation, and extract the first letter of each rule. Follow the rules and you will avoid the all too often resulting U.S. position — pulling the proverbial PET rabbit out of a hat.

The Office of Secretary of Defense and the Military Departments should ensure that their negotiators are adequately trained before they start committing millions of taxpayer's dollars.⁸ The solution: The Defense Systems Management College international acquisition courses must be designated as "Qualification Mandatory Courses"⁹ for acquisition personnel assigned to international acquisition programs.

Endnotes

1. "Public Employees and the Global Landscape," *Public Manager*, Vol. 21, Norman R. Augustine, Spring 1992. Emphasis added to the last phrase of quote.

2. *Politics of Compromise: NATO and AWACS*, Arnold Lee Tessmer. National Defense University Press. 1988. This is the only publication in the open literature that the author is aware of specifically regarding government-to-government international negotiations. It is not a book on how to negotiate, but a historical documentation of events which occurred during the negotiation of the NATO AWACS Multilateral Program agreement.

3. Allied and friendly nations with

which the United States has authority to enter into cooperative acquisition programs are the NATO nations, plus Japan, the Republic of Korea, Australia, Egypt, and Israel.

4. According to the 1990 "Report of Defense Cooperative Research and Development Projects," DoD's resource allocation for Nunn Amendment Programs totalled \$645 million during the 5-year period FY86-90.

5. Both the specific projects and the interested military department are purposely not identified.

6. *Guidebook for Preparation and Negotiation of International Armaments Cooperation Memoranda of Understanding: Strategies, Tactics and Positions*, Jerry A. Cooke, Defense Systems Management College Guidebook, March 1991. FOR OFFICIAL USE ONLY.

7. "Offtake" is a commonly used term in international programs which merely refers to the number of production units procured by each nation. Since research and development is normally considered to be only 10-20 percent of the total acquisition cost, perhaps better arguments could have been made for U.S. participation based upon procurement considerations and commonality of follow-on support.

8. The Navy has consolidated management of all its international activities under the Navy International Programs Office (NAVIPO). This office has made a concerted effort to centralize negotiations and train its negotiators at DSMC. Furthermore, the Navy is the lead service for the development of a computerized International Agreements Generator, a potentially useful tool in the hands of trained negotiator.

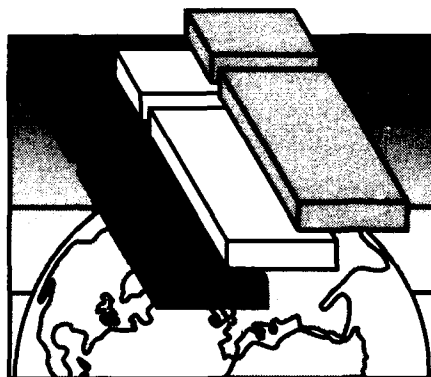
9. DoD Regulation 5000.X-R, "The Acquisition Career Management Program," Final Draft. July 1992.

See definition of "Mandatory Training Courses."

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WHERE HAVE ALL THE LEADERS GONE?

A Comparison of Leadership vs. Management in Defense Acquisition

Major Dennis Drayer, USAF

As the Office of the Secretary of Defense (OSD) and the Service components struggle to revitalize acquisition policy and processes, corporate America is receiving mixed signals about how the future is to be shaped. The current administration opposes a formal industrial policy, but the Deputy Secretary of Defense and Under Secretary of Defense for Acquisition issued a clear statement of technology thrust areas to field needed advanced systems during the next 15 years.¹ Defense Secretary Richard Cheney emphasizes that the Department of Defense (DOD) is not in the business of propping up the defense industry but OSD, in taking

steps to help shape the future, announced a new acquisition business strategy based on technology demonstration and prototyping.² The DOD acquisition policy directs each Service to submit long-range investment plans every other year, but OSD and the Services' approach to the resource allocation process is extrapolative and somewhat mechanical in nature, geared to satisfy short-range fiscal constraints.

While we cannot make future decisions now, the decisions we make today can help shape the future we want. It is vitally important for Service acquisition executives to provide long-range investment strategy advice as the corporate services converge on a solution. Our national security requires senior defense executives to think about the long haul. Dramatic challenges facing the defense industrial base further highlight the urgency of sound strategic thinking to guide near-term decisions. Simply adapting to whatever comes along will leave us rudderless on rough seas.³

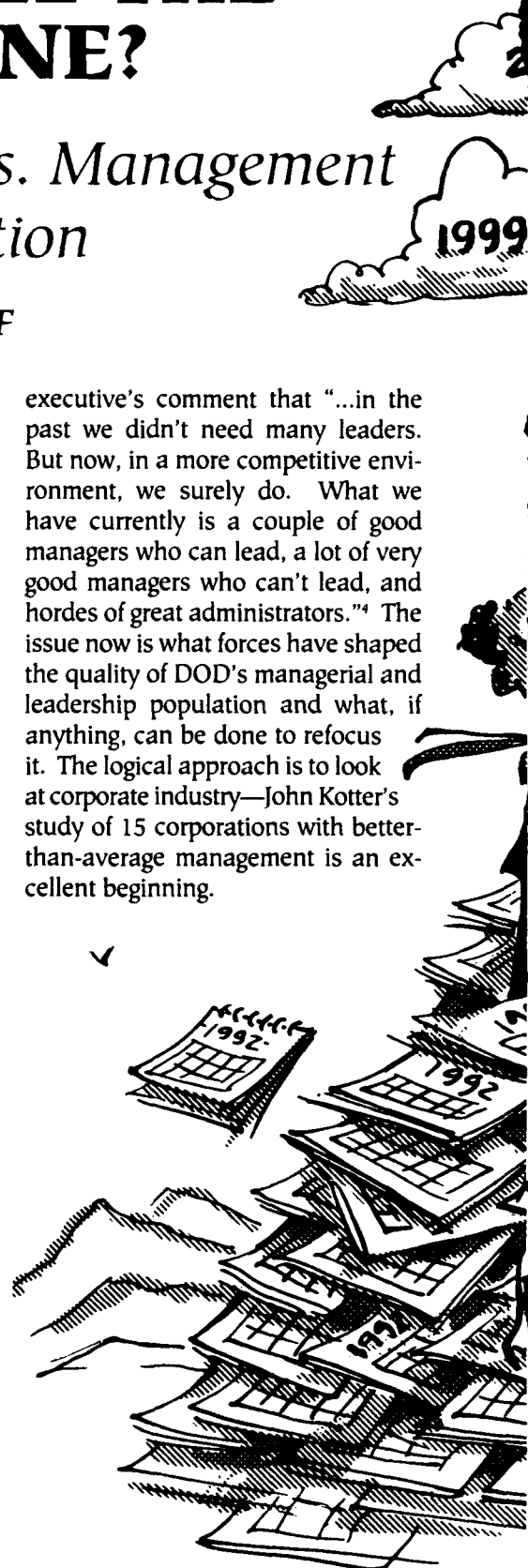
Senior levels within OSD would undoubtedly agree with one industry

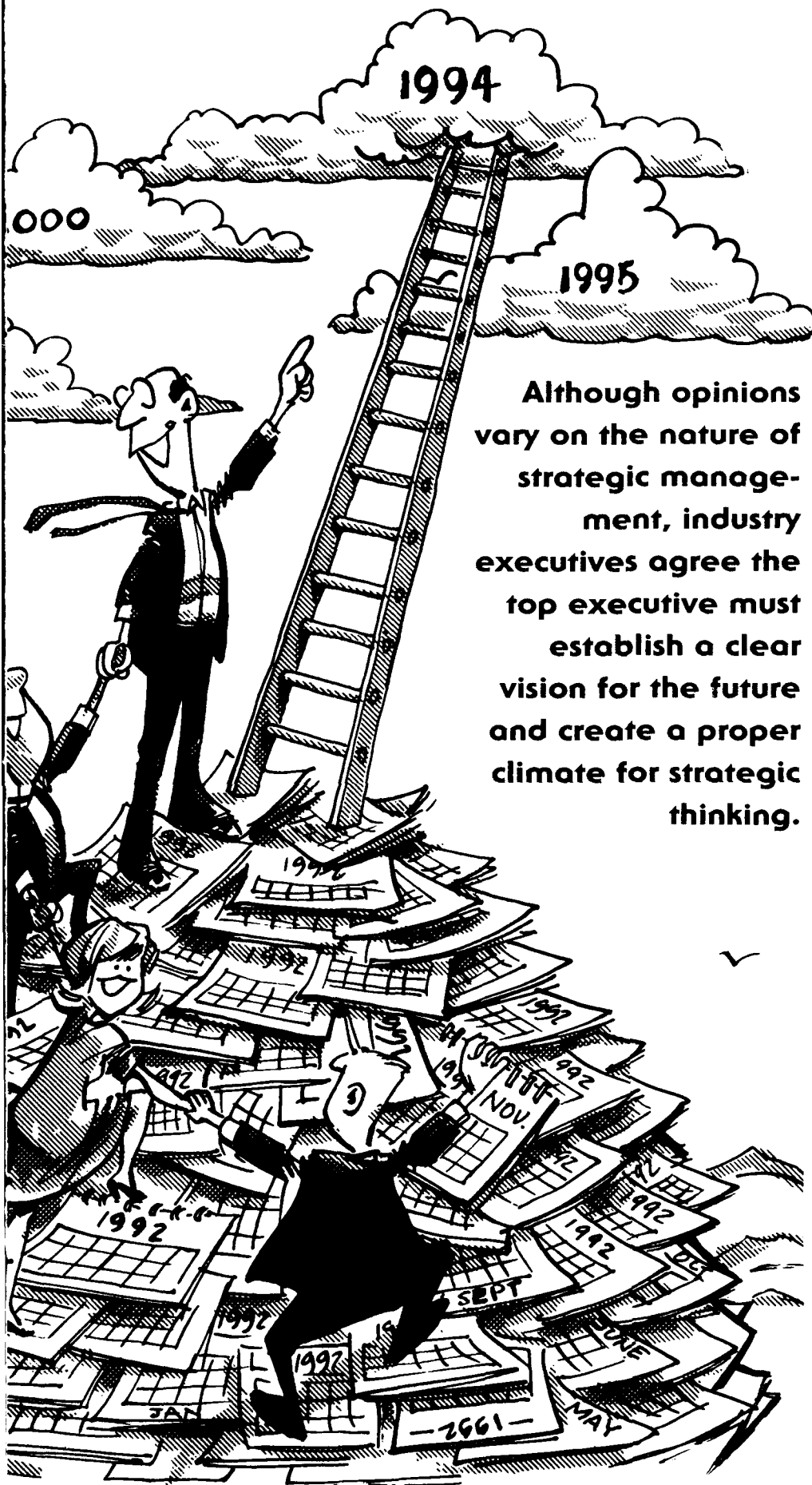
executive's comment that "...in the past we didn't need many leaders. But now, in a more competitive environment, we surely do. What we have currently is a couple of good managers who can lead, a lot of very good managers who can't lead, and hordes of great administrators."⁴ The issue now is what forces have shaped the quality of DOD's managerial and leadership population and what, if anything, can be done to refocus it. The logical approach is to look at corporate industry—John Kotter's study of 15 corporations with better-than-average management is an excellent beginning.

For the past 3 years Major Drayer served at Headquarters, United States Air Force, as a programming officer in the Directorate of Programs and Evaluation and as an acquisition programming manager in the Management, Policy, and Program Integration Division, Assistant Secretary of the Air Force (Acquisition). He is a graduate of PMC 92-1 and is attending the Air Command and Staff College, Maxwell AFB, Ala., where he is the class commander.

Disclaimer:

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Although opinions vary on the nature of strategic management, industry executives agree the top executive must establish a clear vision for the future and create a proper climate for strategic thinking.

Kotter points out that most inadequate leadership practices are created by two powerful forces operating inside corporations—short-term economic pressures and parochial politics. These forces influence practices directly by shaping managerial behavior and, indirectly, by influencing culture, structure and systems.⁵ When interviewed, executives rarely state explicitly that inadequate practices are the product of “short-term economic forces” and “parochial politics.” At the same time, implicit in most of their comments is a concern about the impact of those two forces.⁶

Kotter develops several examples of how these two forces can shape the quality of a firm’s managerial population—DOD can readily identify with several of these models. Many individuals at senior DOD levels, particularly those with strong operational backgrounds, can be compared to industry entrepreneurs. Successful entrepreneurship and effective corporate leadership involve risk-taking (in contrast to management, which tries to eliminate risk). But, unlike effective business leaders, successful “entrepreneurs” are often independent, parochial and competitive. This is fine so long as they are in charge of their independent programs and organizations. But, in the middle of a corporate OSD or Service headquarters, one finds a predictable set of problems. Often, one finds it difficult to enlarge agendas to consider the legitimate interest of the rest of the organization, or broaden networks to include other organizations and key people. While trying to continue operating like an independent operational commander or program manager, entrepreneurs sooner or later end up in a series of increasingly difficult conflicts.⁷

Few firms with reputations for superior managements are both highly centralized and highly bureaucratic. The reason probably is related to one fact: a centralized structure and highly bureaucratic systems do not support

many of the best practices needed to develop sound leadership capacity in management.⁸ Unfortunately, DOD is both which makes it difficult to offer young people, early in their careers, challenging opportunities and leadership possibilities.

Kotter notes that managing strictly through a highly disciplined system with elaborate control mechanisms does not work particularly well, except with much leadership, in the kind of volatile and unpredictable environment that competitive intensity has created during the last decade and a half—detailed planning becomes increasingly difficult to do well. A managerial emphasis on formal structure, systems, job descriptions and the like creates a rigidity that often is not capable of responding quickly enough to new competitive thrusts. The tendency to control everybody discourages the innovation and motivation needed in truly competitive environments. Too much management can lead to unethical behavior by people under pressure to meet impossible objectives.⁹ The manifestation of just such a management system is, unfortunately, readily apparent within DOD.

Strategic management provides a compelling vision of future success to guide decision-making in shaping that future. An ongoing process that assesses external and internal environments to identify where change is needed, strategic management is system-oriented and interested in how things work together, rather than in separate components. Simple processes and innovative thinking about qualitative shifts are emphasized instead of analysis and forecasting. It strives to improve decision-making by identifying important issues and providing alternatives. Each organization must evolve a process that best fits its environment and has widespread commitment. There is, however, one absolute rule—the top executive must take the lead to envision the future. This cannot be delegated.¹⁰

Great vision rarely, if ever, comes from magic or divine grace. It emerges when a powerful mind, working long and hard on massive amounts of information, is able to see (or recognize in suggestions from others) interesting patterns and new possibilities. People who help develop such visions and strategies are not magicians. They tend to be broad-based strategic thinkers willing to take risks. Visions and strategies always have some risk built into them out of necessity; unlike plans that seek to eliminate uncertainty, it is not possible to make major change without some risk. This direction-setting process tends to go through periods of both great activity and very little activity. As such, visions and strategies tend to be dynamic, not static, and evolve. Although sometimes brilliantly innovative, most of the time visions have a remarkably commonplace quality to them and are usually made up of ideas that are well known.¹¹

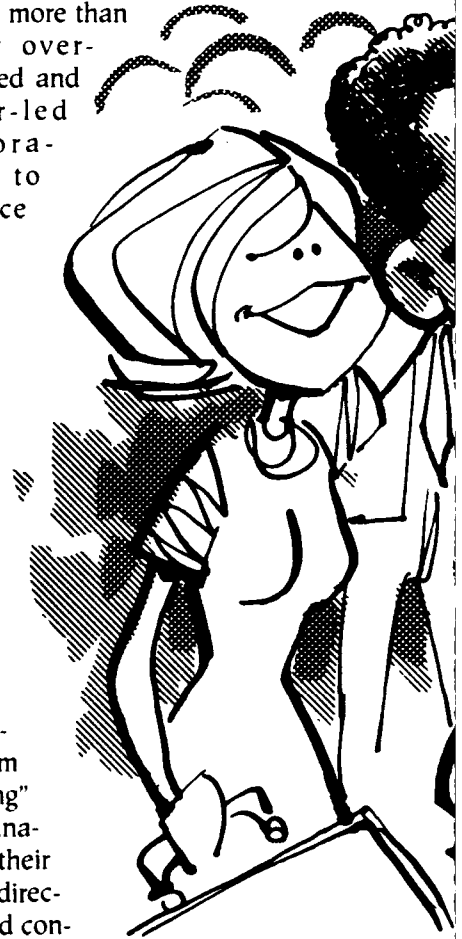
People regularly confuse planning or long-term planning with setting direction. Planning is a deductive management process primarily designed to help produce orderly results, not change. The direction-setting aspect of leadership does not produce plans, it creates vision and strategies. Vision, as used here, is not mystical or intangible but a description of something in the future, in terms of the essence of what it should become. Typically, a vision is specific enough to provide real guidance to people, yet vague enough to encourage initiative and to remain relevant under a variety of conditions.¹² Bryson and Koteen agree a vision must focus on a better future, challenge people to excel, appeal to common values, create enthusiasm and emphasize unity. A good vision statement will restate the mission, identify basic philosophies and core values, describe strategies, provide performance criteria, present guidelines for making decisions, and reaffirm ethical standards.¹³

Long-term planning is time-consuming and constantly must be

updated whenever something unexpected happens. In today's dynamic environment, the unexpected has become the norm and long-term planning is an extraordinarily burdensome DOD activity. Even short-term planning is an infinite black hole, capable of absorbing an endless amount of time and energy. Contingency planning can literally go on forever, draining time and attention from more essential activities without providing the clear sense of direction needed. With few constraints around the planning process, every potentiality deserves a plan. After a while, the process degenerates into a highly politicized game. A lack of recognition of this distinction has caused more than a few over-managed and under-led corporations to embrace

"long-term planning" as a panacea for their lack of direction and consequent inability to adapt to an increasingly competitive and dynamic business environment.¹⁴

Establishing a vision of success draws everything into a concise portrait of an organization's future if it achieves its full potential. In large, older organizations, such as OSD,



creating the right vision and values, if they do not already exist, can be an awesome task. Koteen says the ability to articulate this vision is the "hallmark of leadership success."¹⁵ Motivation over time requires that visions and strategies be communicated on a continuous basis, not

others, they amount to more than the sum, because they make more of their experiences.¹⁷ There is no generally accepted definition of leadership. Kotter defines it as the process of moving a group in some direction through mostly noncoercive means. Burns (1978), Jennings (1960),

the organization, the measurement of performance, and a host of other issues. Carefully considering such questions in advance enables self-confidence to encourage contrary opinions, and to abandon himself to the strengths of others. The true leader listens to the ideas, needs, aspirations and wishes of followers, and responds in an appropriate fashion.¹⁸

Without question, communicating the vision, and the atmosphere around the vision, has been, and is continuing to be, by far the toughest job we face.

DePree stresses the one forgotten, but essential, truth about leadership: Leaders have ideas. Leaders owe a clear statement of the values of the organization. These values should be broadly understood and agreed to, and should shape corporate and individual behavior. Leaders are obligated to provide and maintain momentum. This comes from a clear vision of what the corporation ought to be, a well-thought-out strategy to achieve that vision, and carefully conceived and communicated directions and plans which enable everyone to participate and be publicly accountable in achieving those plans.

Although opinions vary on the nature of strategic management, industry executives agree the top executive must establish a clear vision for the future and create a proper climate for strategic thinking. In a *Fortune* magazine survey, 7 of 10 top executives in companies with more than \$2 billion in sales said strategic planning is their top responsibility over all other tasks.¹⁹ The commitment to dedicate time is crucial. Steiner reports a major reason strategic management systems fail is because top managers are engrossed

and others define effective leadership as producing movement in the long-term best interests of the group.

In *Leadership Is An Art*, Max DePree explains that the leader

is the "servant" of his followers in that he removes obstacles that prevent them from doing their job and enables them to realize their full potential. To do this effectively requires clear thinking on the part of the leader. He must be clear about his beliefs, having thought through his assumptions about human nature, the role of

just once or occasionally. Jack Welch, chairman of GE, admits that "Without question, communicating the vision, and the atmosphere around the vision, has been, and is continuing to be, by far the toughest job we face."¹⁶

Leaders, like anyone else, are the sum of all their experiences but, unlike



with day-to-day problems and don't allocate enough time to perform strategic management duties. He reports research showing, for highly complex organizations, that top executives should spend a full third of their time on strategic management tasks.²⁰

Studies indicate successful and effective executives have (1) a vision of what should be, which takes into account the legitimate interests of all the people involved; (2) a strategy for achieving that vision, recognizing all broadly relevant environmental forces and organizational factors; (3) a cooperative network of resources powerful enough to implement that strategy; and (4) a highly motivated group of key people in that network committed to making that vision a reality. The effective leadership 10 layers below the chief executive officer (CEO) and the latter's effective leadership of the overall corporation share common fundamentals—a good vision and strategy backed by sufficient teamwork and motivation.²¹

Management, on the other hand, is generic. Its basic goals for market research, accounting, inventory control and competitive analysis can be applied anywhere (more or less). The problem is that managerial jobs today require more than management. Good planning, budgeting, organizing, and controlling are no longer sufficient. Good visions, strategies, coalitions and motivation are required to deal with competitively intense business environments.²² Unlike management, leadership requirements include things that are situation-specific and tend to take time, often much time, to develop.

Modern management can be described in many ways, but usually includes at least four key processes: (1) planning, the science of logically deducing means to achieve given ends; (2) budgeting, that part of the planning process associated with an organization's finances; (3) organizing, creating a formal structure that can accomplish the plans, staffing it

with qualified people, defining clearly what each person's role is, providing them with appropriate financial and career incentives, and delegating appropriate authority to those people; and (4) controlling, looking constantly for deviations from a plan and using formal authority to solve them, often via review meetings or financial management control systems.²³

Contrasting these lists leads to two important conclusions. First, management and leadership are not mutually exclusive. In some situations, there is no logical reason why a person with the appropriate background and skills could not do both well. You might say the two are complementary and, sometimes, overlap. At the same time, leadership and management differ in terms of their fundamental purpose. The primary function of leadership is to produce useful change, while management creates orderly results which keep something working efficiently. The two, however, must work together. Plans do not have to include a vision (or vice versa). Budgets don't necessarily have strategies (or vice versa). The formal structure an executive has and the network of cooperative relationships he needs can be quite different, as can the process of controlling people and the process of motivating them.²⁴ Leadership itself never keeps an operation on time and on budget year after year. And management by itself never creates significant useful change.²⁵

Management is different from leadership in that it is more formal, scientific and, hence, universal. It is a set of explicit tools and techniques based on rational reasoning and testing, designed to be used in remarkably similar ways across a wide range of business situations. Effective management requires a considerable knowledge of disciplines that comprise modern management; techniques for planning, organizing, budgeting, controlling staffing, and the rest. Unlike leadership, management does not necessarily re-

quire an extensive knowledge of the situation being managed. (The whole concept of the professional manager who can manage anything is based on this point).²⁶ Many management courses today are oriented at filling either the human skills portion of managerial effectiveness or developing the technical skills aspect of pro-



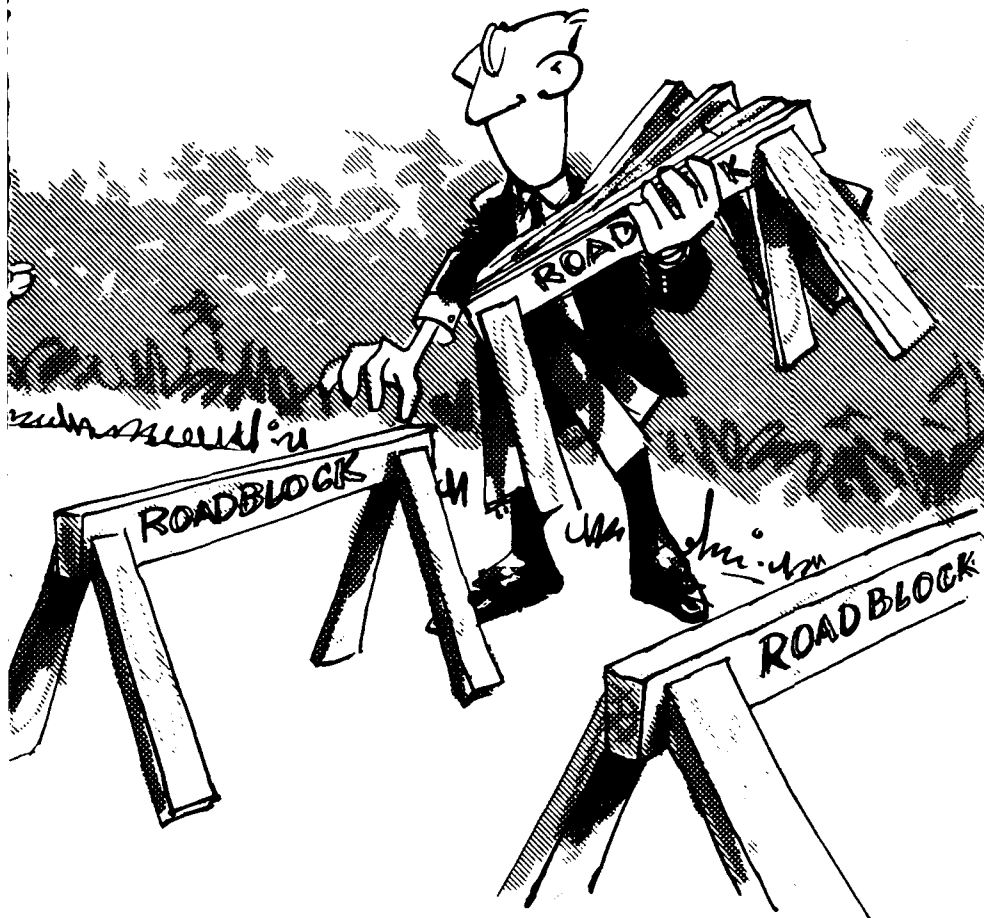
gram management. Unfortunately, not enough attention is rendered to developing the conceptual and visioning type skills required of top "management" and demanded of senior leaders.

Leadership in a strategic management application, whether at a program or organizational level, is not well understood beyond the classroom. While it is important to understand creative problem-solving methods, negotiation skills, financial analysis, and conflict management strategies,

the truth is that much of this effort truly takes the leader away from his task—to lead. In his book, *Why Leaders Can't Lead*, Warren Bennis describes the morning he discovered he "had become the victim of a vast, amorphous, unwitting, unconscious conspiracy to prevent me from doing anything whatever to change

staff people, but are not trained in leadership. Most acquisition programs are overmanaged and underled, not because the managers lack magnetism and personal presence, but because far too few program managers have a clear understanding of what leadership is and what it can accomplish. Without such a vision, even

shape the quality of our top defense executives. The problem is that leadership is something cultivated during a considerable period of time, through a combination of inherent capacity, early childhood experiences, formal education, and career experiences. Formal education can supplement and build on the attributes required of



In Leadership Is An Art, Max DePree explains that the leader is the "servant" of his followers in that he removes obstacles that prevent them from doing their job and enables them to realize their full potential.

effective leaders, but it cannot create the motivation, develop the personal values, intensify the abilities and skills, improve the reputation, build the relationships, or infuse the career of experiences required of an effective leader.

the...*status quo*."²⁷ His point was that leaders must lead, not manage. We all find ourselves acting on routine problems because they are the easiest things to handle. Rather than conceptualizing and spending time thinking about the forces that affect the destiny of the organization, we become immersed in the day-to-day operations of the organization.

Too often too much attention is paid to doing things right, rather than doing the right thing. People are taught how to be good technicians and good

the most capable people have great difficulty trying to lead effectively and to create an environment which will help others to lead.

Individuals must lead at every level, not simply at the most senior layers of the institution. A program manager, just as the Secretary of Defense, Service secretaries and Service acquisition executives, must plan for success as a leader in his program by developing a framework for strategic management of his program and following the same principles that

Program managers need to understand the difference between management and leadership. Managerial jobs are assumed to provide formal authority commensurate with responsibility—this is one of 14 "Principles of Management" originally stressed by Henry Fayol. Although managerial experience certainly helps, someone can do an excellent job of planning, organizing and controlling without having the reputation and relevant track record that provide leaders with essential credibility. Managers clearly need some minimum analytical ability, memory and judg-

ment, but strong interpersonal skills necessary for leadership are not inherent in management functions. A considerable energy and integrity level is needed for both in complex settings.

Overall, personal requirements for effective management are different from and, in many ways, simpler than leadership requirements. Relatively speaking, it requires considerably more to provide effective leadership. In light of the increasing need for managers who can both manage and lead effectively, the combined list of attributes needed to provide effective management and leadership is a long one.²⁸

Having examined forces that shape the quality of DOD's managerial and leadership population, and having compared effective leadership and management, how can top defense executives plan for success as leaders in developing a framework for strategic management? The following list synthesized 10 key points from leading authorities for success and failure.

1. Maintain a concern for vision and risk. Leaders, in a special way, are liable for what happens in the future, rather than what is happening day-to-day. Concentrate on what will be important tomorrow and not just operational matters of today. Though past results and processes need to be reviewed, the emphasis on the duties and performance of leaders has to be on the future. Much of a leader's success or failure can be reviewed only after-the-fact, in the months or years ahead.

2. Individuals at the strategic level—senior OSD executives, Service secretaries and acquisition executives—need to shift thinking patterns from the finite nature of budgets and programs to envision the future in order to resolve complex problems that will take 10-25 years to complete.

3. Leaders must get seriously and accountably involved in their work.

Certain people who are competent, well educated, energetic and well supported with good tools often fail because superficiality does them in. Develop an organization-wide commitment, starting with the top executive.

4. Learn, practice, and encourage open lines of communication. Access to pertinent information is essential to getting the job done. Information is power, but it is pointless power if hoarded. Power must be shared for an organization or relationship to work. Err on the side of sharing too much information rather than risk leaving someone in the dark.

5. Identify, develop, and nurture future leaders. Leaders are responsible for future leadership. A primary responsibility for top executives is making sure the organization survives after they depart.

6. Leaders must be able to focus and provide continuity and momentum. Those finding complexity where simplicity ought to be encumber people, rather than enabling them.

7. One of the key responsibilities of leadership is the obligation to be rational. A key inhibitor to commitment in corporations today occurs when, in the perception of those who follow, the leadership is not rational.

8. Leaders rely on people instead of structures. Structures do not have anything to do with trust. People build trust. Balance the intuitive skill and judgment of managers with formal processes. Regularly involving line managers in the process provides a source of fresh ideas and insights.

9. Keep the system simple and worth the effort. Balance and link various parts of the process. Tailor the process to unique characteristics of the organization, mesh it with other management processes and modify the system as conditions change.

10. Secure the right organizational climate. To avoid backlashes, plans for change must be carefully thought out and skillfully announced. Implementing change is impossible if top executives misread the climate or try a strategy that poorly fits the culture.

Warren Bennis' perception of America's leadership dilemma rings true for OSD and the acquisition community even more clearly: "The founding fathers and the adventurers and inventors who succeeded them were dreamers, and dreamers on a grand scale. Today, we do not dream but merely fantasize about money and things. As individuals, we need dreams in the way we need air, and as a society, we need true leaders—uncommon men and women who, having invented themselves, can reinvent America and restore the collective dream by expressing for and to us that irreverent, insouciant, peculiarly American spirit."²⁹

Today there is no such thing as an ideal leader. These concepts should enhance our ability to think and act strategically, making it easier to set priorities and courses of action. The ultimate test of anyone in authority is whether he or she can successfully ride and direct the tides of change and, in doing so, grow stronger.

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